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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,311	12/21/2001	Marco Di Benedetto	ANDIP006	8021

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BEYER WEAVER & THOMAS LLP  
P.O. BOX 70250  
OAKLAND, CA 94612-0250

EXAMINER
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BILGRAMI, ASGHAR H

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/026,311

Applicant(s)

BENEDETTO ET AL.

Examiner

Asghar Bilgrami

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claim 1-35 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1-35 rejected under 35 U.S.C. 103(a) as being unpatentable over Arendt (U.S. (U.S. 6,003,075). and Arendt (6,427,163)

1. As per claims 1, 13, 25, 26 & 27 Arendt (U.S. 6,003,075) disclosed a method for implementing high availability in a fibre channel switch in a storage area network, the method comprising (col.4, lines 35-63): identifying a message at a first application running on an active supervisor in a fibre channel switch (col.7, lines 23-31). However Arendt (U.S. 6,003,075) did not explicitly disclose determining high availability characteristics associated with the message, wherein high availability characteristics provide information for synchronizing a second application running on a standby supervisor in the fibre channel switch with the first application; providing the message to the second application running on the standby supervisor when high availability characteristics indicate that the message should be mirrored.

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In the same field of endeavor Arendt (U.S. 6,427,163) disclosed determining high availability characteristics associated with the message (col.1, lines 24-55 & col.6, lines 31-53), wherein high availability characteristics provide information for synchronizing a second application running on a standby supervisor in the fibre channel switch with the first application (col.7, lines 58-67 & col.8, lines 1-4); providing the message to the second application running on the standby supervisor when high availability characteristics indicate that the message should be mirrored (col.8, lines 6-12).

Therefore it would have been obvious to one in the ordinary skill in the art to have incorporated identifying high availability characteristics associated with message as disclosed by Arendt (U.S. 6,427,163) into the method for implementing high availability in fibre channel switch in storage area network as disclosed by Arendt (U.S. 6,003,075) in order to make the storage area network more secure in term of failures and increase its reliability and robustness resulting in more stable network.

2. As per claims 2, 3, 21, 24, 28 & 29 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 1, further comprising determining subscriber characteristics associated with the message, wherein subscriber characteristic provide information for determining which applications running on the active supervisor have subscribed to receive the message {Arendt (6,427,163)} (col.3, lines 1-35 & col.6, lines 31-53).

3. As per claims 4, 20 & 30 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 19, wherein the message is copied into the first pending transaction

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buffer and a reference to the message is provided to a first plurality of applications running on the first supervisor {Arendt (6,427,163) (col.1, lines 24-67 & col.2, lines 1-13).

4. As per claims 5, 19 & 31 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 4, wherein providing the message to the plurality of subscribers comprises providing the subscribers with a reference to the message in the first supervisor shared buffer {Arendt (6,427,163) (col.11, lines 43-67 & col.12, lines 1-3).

5. As per claims 6 & 32 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 3, further comprising providing the message to a plurality of subscribers running on the standby supervisor {Arendt (6,427,163) (col.3, lines 12-35 & col.5, lines 9-30).

6. As per claims 7 & 33 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 6, wherein providing the message to the plurality of subscribers comprising copying the message to a second supervisor shared buffer {Arendt (6,427,163) (col.1, lines 12-29 & col.4, lines 51-61).

7. As per claims 8 & 34 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 7, wherein the message is copied to the second supervisor from the first supervisor asynchronously {Arendt (6,427,163) (col.1, lines 24-67 , col.2, lines 1-13 & col.7, lines 58-67).

8. As per claims 9 & 35 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 8, wherein an acknowledgement to the message is sent by the first application before the message is copied to the second supervisor {Arendt (6,427,163)} (col.5, lines 6-67).

9. As per claims 10, 22 & 23 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 22, wherein the message is copied into the second pending transaction buffer and a reference to the message is provided to a second plurality of applications running on the second supervisor {Arendt (6,427,163)} (col.1, lines 24-67, col.2, lines 1-13 & col.7, lines 58-67).

10. As per claim 11 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 1, wherein high availability characteristics relate to mirroring, persistence, and logging {Arendt (6,427,163)} (col.7, lines 57-67 & col.8, lines 1-4).

11. As per claim 12 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the method of claim 11, further comprising maintaining a first supervisor transaction log if high availability characteristics indicate that the message should be logged {Arendt (6,427,163)} (col.5, lines 9-30, col.7, lines 57-67 & col.8, lines 1-4).

12. As per claim 14 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 13, wherein the first supervisor is further configured to send an advance

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notification associated with the message to the second supervisor before passing the message to the second supervisor {Arendt (6,427,163) (col.1, lines 24-67, col.2, lines 1-13)}.

13. As per claim 15 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 14, wherein the advance notification is a sequence number associated with the message {Arendt (6,427,163) (col.1, lines 24-67, col.2, lines 1-13)}.

14. As per claim 16 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 15, wherein the advance notification is transmitted synchronously before an acknowledgement is sent to the external fibre channel network entity {Arendt (6,427,163) (col.1, lines 24-67, col.2, lines 1-13)}.

15. As per claim 17 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 16, wherein the message is transmitted asynchronously after the message is acknowledged {Arendt (6,427,163) (col.1, lines 24-67, col.2, lines 1-13)}.

16. As per claim 18 Arendt (U.S. 6,003,075)- Arendt (U.S. 6,427,163) disclosed the fibre channel switch of claim 17, wherein the second supervisor is configured to use the advance notification to verify the consistency of its internal state {Arendt (6,427,163) (col.1, lines 24-67, col.2, lines 1-13, col.5, lines 9-67)}.

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*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asghar Bilgrami whose telephone number is 571-272-3907. The examiner can normally be reached on M-F, 8:00-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
AB

Asghar Bilgrami  
Examiner  
Art Unit 2143

  
DAVID WILEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100